

HORIZONTAL-FLOW TRAP AND HOUSING ASSEMBLY WITH ODOR PREVENTING CLOSURE MECHANISM

ABSTRACT OF THE DISCLOSURE

An odor trap apparatus (20) for conveyance of wastewater to an external drain includes a housing (32) having an interior and an opening (48) extending from the interior to the external drain, and a cartridge (22) receivable in the housing interior.

5 The cartridge has an opening (26) for receiving the wastewater, and an exit opening (78) disposed to communicate with the housing opening. The cartridge and the housing have positions of final secured interconnection, when openings (26, 48) are aligned, and of initial unsecured interconnection, when their openings are not aligned. A lever (52) is swivelably secured to the housing bottom wall (46), and has

10 a cap (54) for closing the housing exit tube (28) and a projection (56) engageable with the cartridge for effecting the closure when the housing opening (48) is not aligned with the cartridge exit opening (78). Three L-shaped keyways (60) in the housing interior are adapted to mate with three keyways (82) in the cartridge, and have corrugated surfaces to provide a ratcheted secure connection between the cartridge and the

15 housing when in the secure orientation. The L-shaped keyways further have inclined surfaces (68) which provide a camming action to facilitate removal of the cartridge from the housing. Two implementations employed to prevent misorientation between the housing and the cartridge include (1) a different dimensioning of at least one of the keys and the keyways from another of the keys and the keyways and (2) the

20 positioning of the keys and the keyways in other than a 120° positioning from one another. A tool (92) is used to insert and to remove the cartridge from the housing. The tool has arced T-shaped projections (98) which are adapted to fit into openings (26) and which have longer and shorter appendages (102", 102'). Each longer appendage has a protuberance (104) which is adapted to engage a protuberance

(77a) on the underside of the cartridge top wall (74) so as to form a secure latching engagement when the cartridge is to be removed from the housing. Shorter appendage (102') engages top wall (74) for insertion of the cartridge into the housing.